19. For a random sample of 10 pigs, fed on a diet A, the increases in weight in a certain period were : 10, 6, 16, 17, 13, 12, 8, 14, 15 and 9 lbs. For another random sample of 12 pigs, fed on the diet B, the increases in weight in the same period were: 7, 13, 22, 15, 12, 14, 18, 8, 21, 23, 10 and 17 lbs. Examine whether the two diets are significantly different with respect to mean increasing weight (table value 2.09).

20. Describe and one way classification of ANOVA.

APRIL/MAY 2024

FAMB42/CAMB42 — BIO STATISTICS

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define Bio statistics.

2. Explain the classification of DATA.

3. Define Median.

4. What is Co-efficient of variation?

5. Define rank correlation.

6. Give the regression equation X on Y.

7. Recall test of significance.

8. Identify the level of significance.

9. What are the basic principles of Design of Experiments?

10. What is local control?

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) State the limitations of Statistics.

Or

(b) Identify the characteristics of tabulation.

12. (a) Marks obtained by 11 students are given below:

11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21

Find the mean and standard deviation.

Or

(b) State the merits and demerits of mean, median and mode.

13. (a) Explain the types of correlation with example.

Or

(b) Find the rank correlation between Mathematics and Statistics.

Rank in Mathematics:	5	8	6	4	9	10	2	1	3	7
Ranks in statistics:	3	7	5	6	10	1	2	4	8	9

14. (a) What are the various steps involved in test of significance?

Or

(b) Summarize the application of student T-test.

15. (a) Explain randomisation and replication.

Or

(b) Explain the assumptions and applications of Analysis of variance.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss the scopes of statistics.

17. Calculate mean, median and mode for the following distribution.

Class:	4-8	8-12	12-16	16-20	20-24	24-28	28-32
Frequency:	2	6	10	15	8	3	1

18. Calculate Karl-Pearson's coefficient of correlation for the following data.

X:	1	3	5	6	7	9	10	12	14	15
Y:	8	10	12	10	15	18	20	22	20	25